

**Notice of Allowability**

Application No.

10/716,710

Examiner

Tianjie Chen

Applicant(s)

SATO, KIYOSHI

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/27/2006.
2. ☒ The allowed claim(s) is/are 1 and 3-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**TIANJIE CHEN**  
**PRIMARY EXAMINER**

### ***EXAMINER'S AMENDMENT***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- Claims 7-12 have been rejoined for examination.

### ***Reasons for Allowance***

2. Claims 1 and 3-12 are allowed.

The following is an examiner's statement of reasons for allowance:

- With regard to independent claim 1, as the closest reference of record, Dill et al (US 6,819,527) shows a thin film magnetic head in Figs. 19- 21 including: a lower core layer 38 (Column 3, lines 26-27) extending from a surface facing a recording medium in a height direction; a magnetic layer 88 connected directly or indirectly to the lower core layer at a predetermined distance from the surface facing the recording medium; and a coil layer 164 toroidally wound around the magnetic layer 88 (Fig. 21); wherein a plurality of first coil pieces (dotted coil pieces in Fig. 22) extending in a direction crossing the magnetic layer is disposed on the lower core layer with predetermined intervals in the height direction, the first coil (dot-line portions of 164 in Fig. 22) pieces being covered with a coil insulating layer 80 (Fig. 21, column 4, line 1) on which the magnetic layer 88 is formed; a plurality of second coil pieces 164 (coil pieces shown in solid lines in Fig. 22) crossing the magnetic

layer is disposed on the magnetic layer with an insulating layer provided therebetween so that ends of each second coil piece face the ends of each first coil piece in a thickness direction (Fig. 22); the insulating layer comprises a first insulating sub-layer 120 of an inorganic insulating material  $\text{SiO}_2$  (Column 4, line 20) formed on a top of the magnetic layer, and second insulating sub-layers 130 of an organic insulating material polymer (Column 4, line 18-19) formed on both sides of the first insulating sub-layer in a track width direction within a region extending in the height direction and including a formation region of the second coil pieces; and the second insulating sub-layers 130 are formed on both sides of the first insulating sub-layer 120 to have a space larger than at least track width in the track width direction (Fig. 21), and extend beyond both end surfaces of the magnetic layer in the track width direction so as to be interposed between the second coil pieces and both ends surfaces of the magnetic layer; **but fails to show that** wherein the second insulating layers have joint surfaces with the second coil pieces between the second coil pieces and both ends of the magnetic layer, the joint surface being inclined toward the first coil pieces away from at least both end surfaces of the magnetic layer.

- Applicant asserts: this invention is a thin film magnetic head capable of improving the magnetization efficiency and properly securing insulation between the coil and the magnetic layer (Specification, p. 1).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**TIANJIE CHEN**  
**PRIMARY EXAMINER**